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ORIGINAL ARTICLES.

Intra-Bronchial Medication.

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Reprinted from the Southern California Practitioner.

About 1840 Dr. Horace Green, of New York City, called attention to the treatment of bronchitis and chronic laryngitis by means of the local application of nitrate of silver on a sponge passed down into the larynx and through the local bands into the trachea. He was vilified and denounced as a humbug. He persisted in his treatment and soon began to inject strong solutions of nitrate of silver into the trachea. He modified this afterwards, using mild solutions. He had very good success, but his suggestions seemed to have been forgotten and not until a few years ago was it brought prominently to the profession when Professor T. Granger Stewart, of Great Britian called attention to it.

Dr. Semelder of the City of Mexico, states that he has for a number of years been injecting remedies into the trachea by means of a hypodermic syringe through the cricothyroid membrane. Of the workers here in America I only know of a few, of whom Dr. Joseph Muir, of the New York Throat and Nose hospital, and Dr. J. L. Barton, of the same institution, are the only ones whose articles I have seen.

Dr. Green contended that the trachea mucous membrane had great absorbing powers and the experiments and researches of the past few years have proved that he was correct. One of the latest men to report this is Dr. C. G. Coakley (*Medical Record*), who records experiments made as to the absorbing power of the bronchial mucous membrane.

A solution of India ink was made and passed through three thicknesses of filter paper. The individual particles held in solution very small (less than the size of eosinophile granulations in white blood corpuscles). Some of this solution was injected into the trachea of rabbits. It was found in every case (the animals were killed at different times after the injection) that not a trace of the pigment could be found in the trachea, bronchi and alveoli, but all had been absorbed, except where a few lymph cells had ruptured; no free pigment was found in the lymph channels, but was contained within the lymph cells or phagocytes, which were scattered through the lymph channels of the lung underneath the pleura, and in bronchial glands, (deeply pigmented).

Prior to the first of 1896, Dr. Muir had treated about forty cases, most of them having tubercular trouble in various forms. The bronchial irritation in these cases was in the larger number caused by the lung trouble; improvement was had in all the cases. He had used it in bronchiectasis, and bronchorrhea; Dr. Barton in August, 1896, also reports ten cases of laryngo-tracheitis, bronchitis, tuberculosis and one case of asthma, all of them helped and some restored to health. A persistent and annoying cough is a usual accompaniment of these troubles, which distresses the patient, preventing sleep and eating. Usually we give sedatives, as opium or codeia to quiet the cough. The intra-bronchial injections will quiet the cough and relieve the irritation of the larynx, trachea and bronchi without dis-

turbing the general system. The injection used is oil of petroleum purified, with either menthol, oil of Cassia, creosote, guaiacol or any similiar substance, that can be dissolved in the menstruum and used in a sprayer. In case the expectoration is offensive, iodoform or better, europhen 2 per cent. can be used. The method of injecting, in Dr. Muir's words is: The instrument used for the purpose is a glass and hard rubber (or metal) syringe with an endo-laryngeal tube; the capacity is half an ounce and it may be thoroughly sterilized and kept clean. The patient's tongue is drawn out, the syringe is carefully placed in position, a deep inspiration is taken, the cords separate, the end of the instrument is introduced (between and below the local bands) and the fluid is injected. If done without touching the arytenoids or the epiglottis on taking the tube out there is little or no spasm or irritation. A pleasant warm sensation is felt in the chest. It is best, as Dr. Muir suggests, to spray a solution of cocaine into the larynx for the first few times. It is recommended to inject from one to four drachms in three or four injections. I have not been able to bring myself to use more than one and one-half drachms and I inject it at one time. As much as an ounce has been given at a single sitting.

Olive or cod-liver oil, glycerine or mucilage may be used as a menstruum. It is claimed that absorption takes place more readily with a watery solution, than when an oily solution is used.

The advantage of this method of medication are many and have been well stated by Dr. Barton as follows:

1. The remedy is applied directly to the irritated mucus surface.

2. It immediately alleviates the most distressing symptoms, adding at once to the comfort of the patient.

3. In a certain number of cases the antiseptic effect of the medicine is very pronounced, as shown by the longer interval between the febrile attacks and by their lessened intensity when they do occur.

4. The tracheal and bronchial mucous membrane rapidly absorbs the medication so that they may expect a local as well as a general effect.

5. We avoid disturbing the patient's stomach with nauseating doses and shattering his nervous system with opiates.

6. The method of alleviating the most distressing and annoying symptoms does not interfere in the slightest degree with any other line of general treatment.

7. In cases characterized by an atrophic condition of the tracheal mucous membrane or of pulmonary disease with cavities leading to retention and decomposition of the secretions, intra-bronchial injections will remove the disgusting fetor of the breath consequent on this condition.

For brevity's sake I will only report one case. The patient, a woman 27 years old, with phthisis and laryngeal phthisis. Swallowing painful, cough painful; a continual pain and aching complained of in the larynx. Expectoration moderate in amount. The cough disturbed her a good part of the night. An examination of the larnyx showed swollen arytenoids, an ulceration of almost the left false vocal band. Both the vocal bands were red and roughened, the left one particularly so, so much so that I made a note of ulceration. I began to inject a drachm of a 5 per cent. solution of menthol in oil of petroleum although I used cocaine by means of a spray. I had rather a severe spasm of the glottis. This I believe was not due to the remedy but to my touching the arytenoids and epiglottis on taking the instrument out. She, when quiet, which was within two or tnree minutes, spoke of a warming sensation in the chest, and on her return the next day stated that the pain, ache and cough gave her but little trouble during the night. I had given an unfavorable prognosis as to the outcome of the case. She gradually grew weaker every day, but so long as she had the injections given her, her throat did not give her any trouble to speak of. The only thing that it seemed to do besides relieving her, was, the last week she came to see me, to increase the expectoration. She only stopped coming to have the treatment because she grew too weak to leave the house.

Sarcoma.

C. O. CRANSTON, M.D., COTTONWOOD FALLS, KAS.

Sarcoma, in my experience, has been a rather rare affection to be met with in country practice, although frequently enough seen in hospital work. It is true, many cases are never diagnosed, especially those affecting the internal organs, and they go on in their deadly progress under other names.

I wish to report a case coming under my notice a short time ago, which shows the necessity of early diagnosis and operative interference, as only a few weeks time from the incipient stage will place the patient beyond the hope of relief by any known means.

I was called in consultation April 11, 1897, by Dr. —— of this place, to see one of his patients.

It was a case that had come into his hands a few days before. Previous to that it had been under the care of another of our local doctors, whose diagnosis was white swelling; but did nothing toward the relief of the affection other than the administration of some internal medication.

The patient was a girl, aged 13. Up to latter part of January, 1897, was apparently in the best of health. Then she began to limp and complain of a slight soreness in the right knee, and on examination by the mother, a small tumor was noticed just above the internal condyle. She gradually became worse until obliged to take to her bed, when Dr. —— was called. On making an examination, I found a tumor about six inches long and four inches in diameter, situated on the anterior internal aspect of the lower third of right femur just above the condyle. It was firm to the touch, immovable, circumscribed. No evidence of active inflammation, skin somewhat tense, superficial vessels enlarged, not very painful on manipulation, no evidence of fluctuation, both condyles very painful on pressure, general temperature normal, pulse full and a little rapid, skin pale.

After eliminating about everything, my diagnosis was an osteo-sarcoma.

We finally concluded to do an exploratory operation, explaining the case fully and the probable outcome to the mother. This we did on April 17, assisted by Dr. —— of Strong City.

After preparing everything for an aseptic operation, a linear incision three inches long was made over the center of the tumor.

After getting through the skin and superficial muscles the outer envelope of the tumor was incised. Here the hemorrhage was very profuse, coming apparently from every direction. In the center of this mass, and attached to the bone was a whitish substance of about the appearance and consistence of cartilage. Part of this was scooped out with a Valkmann's spoon and preserved. The wound was then packed firmly with gauze to suppress hemorrhage, as it was almost impossible to ligate all the bleeding vessels.

The limb was bandaged and the child put to bed. She recovered from the shock of the operation, and with the exception of considerable post anesthetic nausea and vomiting got along very nicely, until the evening of the seventh day, when her heart suddenly became very weak, and she died that night.

We examined the specimen removed with the microscope and found sarcoma cells; but not being thoroughly satisfied, sent part of it to an eminent pathologist of Kansas City, who reported it a sarcoma of the small celled variety. Thus confirming our previous diagnosis.

This is the most malignant variety of sarcoma. The spindle and giant cells being much less rapid in their growth and infecting tendencies. And it was particularly so in this case, in the short space of two and one-half months since its first appearance had caused the death of the patient, as undoubtedly death was due to the peculiar form of toxemia, which follows absorption from this variety of the malignant growths.

The tumor had grown rapidly in the few days following the operation up to the time of death, when it was fully twice as large

as it was before we operated. This was a case where diagnosis and a hip-joint amputation should have been performed at least six weeks before our exploratory one, to have saved the patient's life.

Diagnosis of Primary Malignant Tumors of the Pleura and Lungs.

The Philadlephia Polyclinic.

Dr. G. Zigari, of Naples, having had occasion to observe seven cases of this character, has made a special study of the difficult subject of diagnosis *intra vitam*, and groups the special clinical symptoms as follows:

1. Insidious commencement of the affection.
2. Marked general debility.
3. Absence of fever.
4. Persistent, increasing pain.
5. Circumscribed edema of the chest.
6. Development of the lymphatic ganglia on one side of the thorax, exclusively or more prominently; possibe turgescence of the veins in the anterior and lateral parts of this side.
7. Sweats and more elevated temperature on one side of the thorax.
8. Distress in breathing, and more intense oppression than can be ascribed to the quantity of fluid obtained by puncture.
9. Irregular distention of the thoracic cage, especially in the superior and anterior region of the chest.
10. Intercostal spaces neither prominent nor dilated.
11. Complete dullness, without the slightest elasticity, in the superior and anterior region of the thorax; zones of dullness close to zones of resonance.
12. Dullness over the manubrium on the sides of the sternum, which indicates not only the displacement of the mediastinum toward the sound side, but also the irregularity of this displacement.
13. Skodiac resonance over the clavicle and sternum.
14. The laryngotracheal murmur distinctly transmitted to the superior regions.
15. Persistence of the plessimetric and acoustic phenomena even after evacuation of the fluid in the pleural cavity.
16. This fluid is very thick, rich in fibrin, hemorrhagic with histologic elements special to the neoplasm.
17. Peculiar sensation of having penetrated into a compact, deep, thick mass, when inserting the needle.
18. Puncture is without effect, or the fluid forms rapidly again.
19. Displacement of the heart and liver, out of all proportion to the amount of liquid withdrawn.

DR. M. B. WARD has secured offices in the Rialto Building at Kansas City, and will remove to that city about June 10. Dr. Ward has established a reputation in Kansas which will without doubt follow him to his new location.

THE preliminary programs for the meeting of the State society have been sent out. There are over forty papers on the program, and a very interesting meeting can be promised.

DR. J. T. SCOTT, of Stafford, Kansas, who is a prominent candidate for the position of superintendent of the Topeka Insane Asylum has been in the city the past week.

DR. G. A. WALL, recording secretary of the State society, has located permanently at Alburquerque, N. M., and will not be able to attend the meeting this year.

THE mortality in tubercular meningitis is about 100 per cent.

NATURE'S method of curing tuberculosis is by encapsulation.

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Topeka, Kansas, Saturday, May 8, 1897.

Functional Heart Disturbances.

Functional cardiac troubles are not usually looked upon with any degree of seriousness, and often the examiners for insurance companies are found to give an opinion as to the safety of such a risk. There are many cases of irritable heart where no organic lesions exists, and we are asked to give an opinion as to the risk. A functional disturbance of the heart without any evidence of an organic lesion, may indicate a serious lesion at some point in the cardiac mechanism. The break may be in the centers in the medulla, the centers in the muscle or in the sympathetic nerves to and from the heart. The disturbance may be an acceleration or a diminished frequency of the heart beat or it may be irregular or intermittent in action. Disturbances in rhythm may be the result of organic change in the pneumogastric or tumor in the medulla, or they may be due to the effect of toxic substances in the blood. In most instances it is a reflex disturbance and the cause must be sought for outside the heart, but it must be remembered that grave symptoms may be caused by or associated with desired conditions outside the pericardium.

These facts must be carefully considered in making our diagnosis, or in giving our opinion as to an insurance risk.

It may be stated as a safe rule in all these cases that any marked disturbance of rythm or any marked acceleration of heart action should require a second examination, and if the functional disturbance persist the case should not be recommended for insurance. A patient who presents these symptoms should receive our most careful scrutiny, and though no organic lesion can be found in the heart he should be given as much consideration as though there were a valvular lesion.

The following letter in regard to rates for the meeting of the Kansas Medical Society, May 12, 13 and 14, has just been received by the secretary from the chairman of the Western Passenger association. If those who expect to attend the meeting will read carefully the rules prescribed, we will have no difficulty in securing the rate. Certificates should be handed to the secretary immediately so that there may be no delay in making proper arrangements:

CHICAGO, May 5, 1897.

Dr. W. E. McVey, Topeka, Kas.

DEAR SIR: In regard to application for reduction in fare in favor of persons attending the meeting of the State Medical Society to be held in Topeka, Kas., on May 12-14, we take pleasure in advising you that rate of a fare and one-third for the round trip upon the certificrte plan, from points in Kansas including Kansas City and St. Joseph, Mo., has been announced subject to the condition herein named, over such lines shown on the enclosed slip as are interested.

Reduced rates on the certificate plan to points within this territory becomes effective only when evidence is presented to the joint agent of the terminal lines at the place of meeting, showing that 100 persons have actually been in attendance holding certificates reading for tickets over terminal lines to the meeting point, and when such certificates are stamped by him with his office stamp and his written signature affixed thereto; except that where parties or clubs traveling in a body or individuals purchase round-trip or excursion tickets to the place of meeting from stations from which the local one-way rate is more than 50 cents and at not less than the rate announced on the certificate plan for the particular meeting in question (instead of one-way tickets at the regular rate) and present to joint agent a certificate from the selling agent to that effect, they will be counted by the joint agent in reckoning the attendance at any meeting.

Certificates showing purchase of tickets at 50 cents or less shall *not* be *counted* in arriving at the total.

Certificates of the issue of any and all lines in territory from which reduction is announced will be considered in computing attendance, and when lines in this territory arrange to honor certificates of connecting lines for business originating beyond this territory, such certificates will also be counted by joint agent.

Ministers or others who travel on clerical or half-fare permits, or commutation tickets of any description, are not entitled to this reduction, nor to be included in computing the number in attendance at any meeting.

Mr. F. E. Nipps, secretary local Passenger association at Topeka, Kansas, has been appointed to act as joint agent in the stamping of certificates issued for your meeting, and it will be the duty of your secretary or other proper officer of your organization, who we understand is yourself, to collect the certificates, certifying on each that the holder has attended the above named meeting, and after collecting and certifying to 100 or more ceftificates of the character described, and which show purchase of tickets to the meeting point, your secretary should take them to the office of joint agent, who will affix his office stamp and written signature thereto on those which show payment of full fare for going trip, and which thereby become available for purchase of return tickets at the reduced fare. He will also stamp any additional certificates of similiar character when properly certified to and presented to him by your secretary, or by the delegates themselves, within proper time limit as provided for herein.

The importance of notifying your delegates in advance of the character of the arrangements made with lines in this territory for reduced rates for this meeting is respectfully commended. Full advice should be given of the conditions upon which the reduced rates is to apply, as previously explained, especially of the attendance required in order to secure the reduction; also of the necessity of obtaining certificates showing the purchase of one-way or round-trip tickets, and the importance of depositing such certificates with proper officer of your meeting at the first session thereof, in order to enable him to promptly present to the joint agent evidence as to the required number being present.

Under the method usually observed in certificate plan business, the passenger pays full fare on going trip, and on presentation of certificates to that effect, and of all other conditions as herein named—including presentation of evidence to joint agent of the required attendance upon the part of those who have purchased one-way or round-trip tickets to meeting point, as shown by certificates presented to him—are complied with, a reduced rate of one-third or one-fifth fare, as the case may be, is granted on return trip (by route traversed on going trip) to original starting point within authorized territory. Where the journey is made over more than one line, it is usually necessary for the passenger to purchase separate local ticket of each road's issue, between points traveled thereon, and procure certificates thereof for each of the lines in this territory over which he travels in going to the meeting, as through tickets are not always sold,

and it is not alway practicable for the various lines to honor each other's certificates. Passengers should, therefore, ascertain from the ticket agent what portion of their journey can be covered by the certificate obtainable from him, and procure certificates filled out to correspond with the tickets purchased.

Failure to procure certificate invalidates any claim for reduction in return fare.

The tickets purchased for *going passage* may be either limited or unlimited, according to the rate paid or the regulations in effect on the line over which it reads; but the return tickets sold at the reduced fare will, in all cases, be limited to continuous passage.

Certificates which show the purchase of tickets not earlier than three days prior to the date announced as the opening date of the meeting, or which show the purchase of tickets the first three days of the meeting, may be honored if presented not later than three days after the date announced as the closing date of the meeting, Sunday not to be accounted as a day in any case.

Two samples of standard form of certificates are enclosed herewith.

Under the rules, it is necessary that the secretary or other proper officer of your organization collect all certificates at the earliest possible time after meeting convenes, take them all to the office of the joint agent at one time, and after he has satisfied himself that the requisite number is in attendance, and that all other conditions upon which reduced rates are made have been fulfilled, he will stamp the certificates with his office stamp, thereby making them valid for return tickets at the reduced rates as announced.

After 100 certificates have been thus stamped by him, all others can have their certificates stamped on individual application, provided same is made within the prescribed limit, three days after the closing date of the meeting, Sunday not to be accounted a day.

Respectfully,

B. D. CALDWELL.

The New Tuberculin of Dr. Koch.

Medical Review.

Prof. Robert Koch has always thought that there existed two kinds of immunities. The one is the immunity against chemical toxins: the animal, as in tetanus for example, is vaccinated with a serum antagonistic to the tetanic toxins; there remains during a more or less lengthy period of time a resistance against the action of these toxines. After such an immunization large quantities of these toxins can be introduced into the circulation with impunity. On the contrary, the serum has no action against the bacilli of tetanus themselves which can proliferate and prosper in an immunized organism.

The other immunity, of which the type is seen in the typhoid fever and cholera serums, is an anti-bacterial immunity with opposite properties to the antitoxic serum: the animal immunized with the virulent cultures destroys very rapidly the specific microbic organisms which are introduced after the immunization. On the contrary the animals remain sensitive to the toxins which, in large doses, cause death.

In tuberculosis it is necessary to determine which kind of immunity is proper and best. Dr. Koch has determined in acute miliary tuberculosis of men, as well as in experimental tuberculosis, that the bacilli, which are present in enormous quantities in the organism, suddenly entirely disappear at various intervals. For a variable length of time no bacilli can be detected. He has explained this disappearance of the tubercle bacilli during the evolution of miliary tuberculosis by supposing a natural immunizing process.

This fact, which proves the existence of a tubercular immunity, brings out at the same time one of the essential conditions. The immunity manifests itself when the organization is most thoroughly saturated with bacilli; when all the organs and tissues are filled with bacilli and their products. It seems that immunity only begins after the tissues have absorbed and digested in-

numerable bacilli.

If one wishes to realize experimental immunity, that is, if one wishes to immunize against tuberculosis, it is necessary to find a process which permits of an introduction in the organism of a considerable number of bacilli which can be easily absorbed and digested by the tissues.

The researches made in this direction have encountered many difficulties. All experiments made with living bacilli are with cultures treated with chloroform, heat, mineral acids, have given negative results until Dr. Koch conceived the idea of treating the cultures with glycerine. This is indeed the original tuberculin of Dr. Koch.

The fact found in connection with the original tuberculin, clinically as well as in experiments on animals, demonstrated that this tuberculin only immunized against the toxins, that is to say, it conferred an immunity against the substance formed by the tubercle bacilli. It did not fortify the organism against the continuous growth of the bacilli. Now as the two immunities are necessary at the same time (the antitoxic immunity, as in tetanus and the anti-bacterial immunity, as in typhoid fever and cholera), it remained to discover a second process capable to immunize against the bacilli themselves.

Always guided by the clinical facts of acute miliary tuberculosis, Dr. Koch believed that this second substance (the anti-bacterial part) is present, along with the first in the ordinary tubercle cultures. Then it only remained to find a process which permitted a common isolation of these two immunizing factors. The tuberculin which Dr. Koch has finally obtained after ten years of research, fulfills his double indication, that is to say, it confers an anti-bacterial immunity and, at the same time, immunizes against the toxins.

The process employed by Dr. Koch which permits a realization of the essential conditions of immunization (the ability of the organism to absorb and destroy a large number of bacilli) is very simple, purely mechanical. It consists in a trituration of dried tubercle cultures in a mortar and a separation, by centrifiguration, of an aqueous suspension of the same.

The Rational Treatment of Pulmonary Phthisis.

J. Hobart Egbert, A.M., M.D., Ph. D., in Medical Summary.

The desiderata in the rational treatment of phthisis are: first, its prevention and arrest; secondly, its cure; or failing these, thirdly, palliation of symptoms and prolongation of life, and can be secured only through an appeal to the laws which regulate the development of the body and govern the preservation of life. Consumption, in any form, is a disease of enervation, of lowered vitality, and of derangement of the general vital and chemical changes within the body—is, in reality, a constitutional disease with local lesions—and hence the folly of the advocated "specific remedy" method of treatment, for how can the subcutaneous injection of any antiseptic, or the inhalation of any medicinal substance or of any amount of compressed air overcome a disease which is at once constitutional and general, and finds its origin in an abnormal bodily tendency?

In the prevention and early arrest of consumption—as in the treatment of the advanced stages of the disease—everything which interferes with the maintenance and promotion of general good health and constitutional vigor must be sought out and, as far as possible, corrected; and anything that can in any way impair the vitality of the lungs or improperly affect their normal functions must be assiduously guarded against. All acute pulmonary disorders, however slight, should be promptly relieved, and all existing affections of the nose and throat should be made the object of careful treatment. Next in importance to the care of the respiratory organs may be mentioned due attention to the digestive functions. Indigestion, both gastric and intestinal, must be guarded against or overcome, and the processes of assimilation should proceed with generous vigor. Nervous disorders and circulatory defects must likewise receive

proper consideration and treatment.

Referring to the etiology of consumption, it seems that we must admit an idiosyncrasy—an inherited or acquired predisposition to the disease. The predisposing cause, unquestionably, to our mind, resides in a disturbance to nutritive functions, through those nerves which govern tissue nutrition and tissue metabolism—the trophic nerves and nerves of the general sympathetic system. Scrofula is frequently mentioned as a cause predisposing phthisis, and rightly so, for it is obviously one of the manifest conditions resulting from disturbed tissue nutrition.

Contagion as a factor of causation may have its influence, but merely as an exciting cause, for in one predisposed this factor would doubtless influence the development and progress of the affection.

Fuller, in his work on "Diseases of the Lungs and Air-passages," says: "It behooves the physician to warn the patient's friends of the dangers incident to long-continued attendance on him, especially if the disease be in an advanced stage. It would be the height of imprudence for a healthy person, especially if young, and of a scrofulous diathesis, to sleep in the same bed, or even in the same apartment with a consumptive patient."

In the prevention and cure of consumption—as well as in the endeavors to arrest and retard the progress of advanced cases—attempts must be made to overcome the etiological factors leading to malnutrition, to bring the reconstructive processes of the body above the destructive, and to supply the tissues with wholesome, sustaining nutriment. All this is to be gained by maintaining every organ of the body in the best possible condition; by securing the best environment; by the liberal use of easily assimilated, tissue-building and strength-sustaining food; and by recourse to tonics, reconstructives and certain special remedies which act directly upon those nerves which govern metabolism.

The necessity for the relief of all functional and organic disorders has already been urged. The environment is of importance. Not only should the sanitary conditions of the residence be well appointed, but it should be properly located, both as to local and meteorological conditions. The best climate is evidently that which possesses the following conditions: dryness; equability of temperature; absence of winds; abundance of sunshine; porous soil; frequent electrical changes; water, pure in quality and plentiful in quantity; and pine odors. Change of climate is frequently a source of much benefit.

General hygienic and dietetic measures for the general well-being of the patient and relief of the disorder are of the utmost importance, for without attention to these, all treatment will fall short. Fresh air and exercise, so far as the powers of the system will permit; free ventilation of both sleeping and living apartments; avoidance of crowded, over-heated and damp places; keeping within doors in bad weather and after dark; the wearing of warm clothing, with flannel next the skin; proper attention to bathing; the use of as nutritious diet as can be assimilated; the avoidance of all injurious habits and excesses, etc., are all embraced in the rational method of treating this and other diseases.

Among the various therapeutic measures recommended for the general treatment of consumption, cod-liver oil heads the list. Cod-liver oil not only exerts a direct beneficial action upon the lungs, but is essentially a reconstructive tonic and nutriment. In its administration it is often wisely combined with hypophosphites, which seem to augment its curative value. Its nauseating tendencies must usually be overcome in order to insure its good effect, and hence the necessity of due care in the selection of an eligible preparation when prescribing cod-liver oil. The preparation known as Hagee's Compound Cordial of Cod-liver Oil is a most admirable and available preparation. It is not only palatable, but very pleasing to the taste, and combines the curative virtues of cod-liver oil and the hypophosphites of lime and soda with the tonic properties of a rich, light wine. Alcohol, in its various forms of fermented and distilled liquors, is indi-

cated in every case of consumption, and its most eligible form in this disease is *wine*. Alcohol is not only a stimulant, but also a nutriment and an antiseptic. For this class of patients, at least, alcohol should never be given in quantities sufficient to produce its baneful effects of dizziness and of excitation, followed by depression. The small amount of wine existing in Hagee's Compound Cordial of Cod-liver Oil is just sufficient to arouse the organs of digestion, to assist the absorption of the cod-liver oil and such other food products as are taken into the system, and arrest the too rapid metamorphosis of tissue.

Aside from wine, brandy and good Bourbon whisky have their uses in the treatment of phthisis, but these uses are concomitant with special indications arising in individual cases.

Finally, there must be employed a remedy, or combination of remedies, that will stimulate those centers which govern bodily nutrition. We believe the use of such a remedy, together with the administration of a proper preparation of cod-liver oil—as already pointed out—to be essential to the rational and successful treatment of consumption. Strychnine is such a remedy, and when combined with atropine becomes of great value. Cinchonidia may also be added when there is pyrexia to overcome. One formula is as follows:

℞ Strychniæ sulphatis, gr. ½
Atropiæ sulphatis, gr. ¼
Cinchonidiæ sulphatis, ʒ ij.
Ext. gentianæ, ʒ ss.

Misce bene. Fiat massa et in pillulas no. lx (60) dividenda.

Sig: One pill night and morning.

A dose of the Compound Cordial of Cod-liver Oil is taken with meals, and one of the above pills is taken an hour after breakfast, and another before retiring at night. When pyrexia is aggressive, quinia may be substituted for cinchonidia; when absent, both may be omitted. Should dryness of the throat occur in cases where there are no night sweats, the atropine may be omitted. Some few cases with marked dryness of the mouth and throat may even call for the occasional administration of gr. ⅛ of pilocarpin, per orem.

In extreme pyrexia and depression, iron, quinine and strychnine may be required. Here is a good mixture of the same:

℞ Ferriet quiniæ citratis, ʒ j.
Strychniæ sulphatis, gr. 1-6.
Aquæ puræ, ʒ j.
Syr. acidi citrici, q. s. ad, ʒ iv.

M. Fiat solutio.

Sig. Teaspoonful in wineglassful of water after meals.

When the above is given, the pills are to be omitted, and the cod-liver oil administered before or during the meals.

The so-called "antiseptic method" of treating consumption seems to be largely based upon a fallacy; nevertheless the internal administration of salol is often productive of good results when conducted together with the rational methods herein set forth. Likewise, hypodermic injection of a solution of phenol and inhalation of vapors containing eucalyptus, tar, benzoin, etc., are sometimes worthy of trial. Creosote, internally administered, is of great value in overcoming cough and allaying irritation in the air passages. It may be administered in mucilage of gum acacia together with syrup of wild cherry or tolu, or dissolved in wine of tar.

To recapitulate: The rational method of treatment endeavors to equalize vital forces; to raise tissue nutrition to the highest possible point; to overcome those conditions which render the disease possible, and to eradicate or relieve local lesions.

The Non-Cutting or Unbloody Operation of Lorenze for the Re-Position of Congenital Dislocation of the Hip.

New York Academy of Medicine Section in Orthopedic Surgery. Meeting of April 16, 1897.

This paper, by Dr. G. R. Elliott, was chiefly a description of the different steps of the procedure, viz.:

1. The reduction, or bringing the head to the level of the acetabulum.

2. Re-position, or wedging the head into the acetabulum.

3. The formation of a solid acetabulum by manipulation, and allowing the child to walk about with the thigh fixed by plaster of paris at about ninety degrees of abduction.

The three steps of the operation were performed under chloroform on a patient, a boy twenty-two months old, by Dr. Elliott, before the members of the section.

Dr. T. H. Myers reported the successful performance on a similar patient, three and a half years old, of Paci's method of manipulation, viz: forced extension, flexion, and then strong traction downward. There were telescoping, lordosis and all the other signs of dislocation, and one-half inch of shortening. A good deal of force was used in order to cause inflammatory adhesion. The limb was imbolized at thirty degrees of abduction, the spica was changed several times in the following six months, and the girl was allowed to go about with a walking brace and a high shoe on the sound side. She walked with a splint walk when the apparatus was removed. The limbs remain at a nearly equal length.

Dr. W .R. Townsend said it would be a great advance if these cases could be cured without a cutting operation. In his experience and observation open methods had proved unsatisfactory. The patients continue to walk lame, and dislocation is liable to recur. He thought the superiority of the new methods could not be taken for granted at once. He had treated one patient by the Paci method.

Dr. A. R. Sayre had seen but one patient in whom the hip could be distinctly reduced by Bigelow's manipulation, but he had not been allowed to operate. In this case it was necessary to abduct the limb much more than in the patient treated this evening. He had not achieved brilliant success by operating. In one case after the child had been walking for six months an abscess developed in or near the joint.

Dr. R. Whitman had operated four times by Lorenz's method, and had seen great advantage from the application of twenty-five or thirty pounds of traction for three weeks before the reduction. It facilitates bringing the head down to the level of the acetabulum, which at times needs a great deal of force.

Dr. H. L. Taylor also thought these patients should have extreme forcible traction before the operation, in order to overcome more thoroughly the muscular contraction. Operative treatment had not been so far very encouraging, and he believed that this procedure held out a good prospect.

Dr. Whitman said that a point in its favor was that mothers would consent to it when they would not consent to a cutting operation. Moreover it did not confine the patient in a hospital or even in a bed.

Dr. Elliott said Paci's and Lorenz's procedures were entirely distinct. Paci aimed to build up a nearthrosis in the vicinity of the joint. Frequently the head did not pass into the acetabulum. His manipulations were first flexion to the physiological limit, then abduction, then lateral rotation and slow extension, then plaster of Paris for three months, and then careful walking with an apparatus. In this original procedure, of Lorenz, however, if entrance of the head was not obtained he deemed the case a failure. It was this re-position plus loading the weight of the body on the bone which made the operation. The acetabulm was there, but rudimentary. The parts immediately began to develope when the bone was replaced. The presence of the bone stimulated the growth which had been absent. The force required in traction was sometime very great.

Archillo-Bursitis Anterior.—In a paper on this subject Dr. S. Lloyd stated that the affection was the result of traumatism from from tight shoes, shoes wearing the heel, bicycle riding, jumping and fractures; or the result of septic, tubercular, gonorrhoeal or rheumatic infection. The symptoms were pain under the tendo achills on standing and walking, and in the plantar region, swelling on the outer side of the tendon, hyperidrosis and extensive inflammation of the surrounding tissues. In the treatment cold and warm baths, the application of tincture of iodine and mercurial inunctions

were useless. Traumatic cases required prolonged rest and pressure, and cases having their origion in infection should be treated by incision curretting and drainage.

Dr. Whitman presented a case of this affection in a woman of thirty-five years who was on her feet from 6 a.m. till 8 p.m. The symptoms of one month's duration, had been pain in the heel and in the metatarsal joints, and on pressure of the os calcis. There was slight thickening. He said these cases often became chronic, and acquired weakness of the arch, or flat-foot. Rest should be enforced. Acute cases required a plaster of Paris bandage, and chronic ones a brace to arrest the function of the joint.

Dr. Sayre had seen cases among athletes, especially hurdle racers, who in making a leap landed on their toes.

Dr. Myers had personally suffered an attack of this kind after a long bicycle ride. He could only walk with ease by everting the foot. In plaster the foot should be placed at right angles to prevent the trouble from becoming chronic.

Dr. V. P. Gibney said that before the pathology was clear these cases used to be called rheumatism of the heel. The region of the tendo achillis had not been clinically explored. A counterpart is found in the advance in our knowledge which enables us to recognize scurvy in the swelling of joints in children who were called rheumatic.

Scarlatinal Synovitis.

By M. A. Bunce, M.D., in the Philadelphia Polyclinic.

Joint complications appearing in the course of many of the infectious diseases have not infrequently been met with. Though more commonly associated with, yet they are in no sense characteristic of scarlatina. Though not essential, a rheumatic history, family or personal, can often be obtained, and would seem to be a factor in rendering the synovial membrane more vulnerable to the infecting toxine. In a case of typhoid fever recently under care, the left shoulder joint became painful on the twelfth day of the disease, lasting in the neighborhood of eighteen hours. The same individual had an attack of acute rheumatism three years ago. When infective synovitis complicates scarlatina it is variously termed scarlatinal arthritis, synovitis, and from the analogy of its clinical picture and therapeutic response, scarlatinal rheumatism. Of 4,034 cases of scarlet fever reported by two observers 3.2 per cent. had articular involvement, though in some instances it was much higher, and in another series of 5,000 cases suppuration alone occurred in nine of them. The following case is a typical one excepting the early onset, and perhaps the severity of the joint symptoms:

F. D., well built, male æt 8 years, had an attack of diphtheria in 1892. When first seen, April 11, 1894, he had a history of having been unwell for thirty-six hours; on the above date a profuse reddish-yellow punctate rash was present upon the face, body and extremities; the mucous membrane of the pharnyx and tonsils was somewhat reddened, though no subjective symptoms relative to this latter were complained of. Papillæ of tongue were not prominent, the pulse and temperature were characteristic of scarlet fever. On the 12th and 13th inst. the restlessness was more marked, and at times he would cry out; on the 14th inst. the eruption of a sudden disappeared, leaving the patient actually, and by contrast, markedly anemic; right foot in the position of talipes varus, the ankle joint swollen and painful; later, on the same day, the corresponding hip joint was the seat of pain. Pulse somewhat feeble, and mild delirium present; 15th inst., most of the larger joints of the extremities were painful and swollen, presenting a typical picture of acute rheumatism, the slightest movement causing him to cry out; 19th inst., up to this time there was an abatement in the symptoms, then the knee and wrist joints were freshly invaded with also a return of the mental symptoms. A cardiac murmur not developed, characteristic of the mitral regurgitant, which was clearly intensified by the anemia present. Up until the 30th inst.

there recurred, after intervals of freedom, irregular involvement of the joints with decreasing intensity, convalescence uninterrupted.

From a clinical standpoint two types of joint involvement are recognized.

1. A transient synovitis, polyticular, usually of a mild grade, appearing with the greatest frequency from the fifth to the ninth day, though it may be postponed as late, or later, than the twenty-eighth day, the susceptibility increasing with the age. Ashby views this class in the light of a septicemia, though no definite enlargement of the spleen is present in the majority of instances.

2. A pyarthrosis, often monarticular, noted only in certain epidemics, ordinarily presenting itself about the third or fourth week. There is no heart complication, and the contents of the joint are purulent from the onset, and are attributable to septic emboli. Streptococci and micrococci have been found in cultures made from the fluid withdrawn from the joints in both types.

In the scarlatinal and even the average healthy pharynx there undoubtedly exist a variety of micro-organisms. It is now generally conceeded that a streptococcus is the cause of scarlet fever, though at different times micrococci and minute bacteria were so constantly present in the cultures from the throat and desquamated epiderm that individual observers were convinced of their specific nature. It would appear that an ordinary attack of scarlet fever in a susceptible though otherwise normal individual is due to a streptococcus endowed with the peculiar property of producing a scarlatinal efflorescence. Of the irregular forms, scarlatinal synovitis may be explained:

1. By the scarlatinal infection precipitating latent rheumatism.

2. By a dual infection, for instance, with streptococcus, having like the rheumatic toxine a predeliction for the synovial and fibrous tissues.

3. A distinct infection similar to but not identical with rheumatism or scarlatina.

The same pathological conditions are present though brought about by a different species of micro organism. A close relation exists between scarlatinal synovitis and rheumatism; the clinical picture in the absence of the eruption is very suggestive of acute rheumatism; the implication of the endocardium, the occasional association of chorea as a sequel; swelling of the dorsa of the hands and feet, due probably to an effusion into the tendon sheaths; purpura, and lastly, the benefit following the administration of the salycilates. If the infection were the same as that of articular rheumatism a much greater percentage of the cases of scarlet fever would present articular symptoms, but that it is capable of exploding latent rheumatic tendencies would seem feasible. giving the association of the above symptoms more weight than that of a mere coincidence.

The interesting features of the case reported were:

a, The sudden disappearance of the scarlatinal eruption on the third day of its existence with the advent of the articular symptoms; the slight desquamation compared with the intensity of the dermatis.

b, The picture of acute articular rheumatism presented, migratory involvement of the joints, irregular fever, implication of the endocardium; anemia, maternal history of rheumatism.

c, The mild pharyngeal symptoms, urine free from albumen, sweating was not marked.

d, The necessity of being on the *qui vive* for accidental rashes appearing in the course of acute rheumatism, and the value of an antecedent attack of scarlatina.

Hodges, commenting on the evanescent character of the synovitis, says that "if not under observation many of the articular symptoms would escape notice, or would not be deemed of sufficient importance in themselves to be brought under medical care;" on the importance of delerium, because during it often no complaint is made, and swelling of the joints may be first noted; it is such a frequent precursor of an arthritic attack as to lead one actually to expect it.

State Requirements for the Practice of Medicine.

W. A. Harper, M.D., of Austin, Texas, has compiled the requirments of the different States and published them in the Texas *Medical News* for March as follows:

1. Colorado—State board composed of six regulars, two homeopaths and one eclectic; appointed by governor; diploma from recognized schools sufficient; examinations granted non-graduates.

2. Connecticut—State board for each of three schools (regular, homeopathic and eclectic); graduates from recognized schools not examined.

3. Delaware—Two State boards (regular and homeopathic); appointed by governor; applicants for examination must have diploma from recognized school.

4. Georgia—Three State boards (regular, homeopathic and eclectic); appointed by governor; applicant for examination must be graduate from school requiring not less than three years.

5. Illinois—State board; graduates from recognized schools not examined; non-graduates are examined.

6. Iowa—State board; diploma from recognized school sufficient.

7. Kentucky—Only graduates from recognized schools allowed to practice; diplomas approved by State Board of Health.

8. Louisiana—Two State boards (regular and homeopathic); appointed by governor; applicants for examination must have diplomas from recognized schools.

9. Maine—State board; appointed by governor; diploma sufficient.

10. Maryland—Two State boards (regular and homeopathic); applicants for examination must have diplomas from recognized schools.

11. Massachusetts—State board; appointed by governor; diploma sufficient; non-graduates may apply for examination.

12. Minnesota—State board; appointed by governor; applicant for examination must have diploma from recognized school.

13. Mississippi—Applicants examined by State Board of Health; diploma not necessary; must be examined.

14. Montana.—State board; appointed by governor; applicant for examination must have diploma.

15. Nebraska—None except graduates from schools requiring three years or more allowed to practice; no examinations; diploma approved by State Board of Health.

16. New Jersey—State board; appointed by governor; applicants for examination must have diploma.

17. New York—Three State boards (regular, homeopathic and electic). Applicant for examination must have diploma from school requiring three years or more.

18. North Carolina—State board examination required; diploma not necessary.

19. North Dakota—State board appointed by governor. Examinations required; diploma not necessary.

20. Ohio—State board appointed by the governor; diploma sufficient, but not required.

21. Oregon—State board. Examination required; diploma not necessary.

22. Pennsylvania—Three State boards (regular homeopathic and eclectic). Appointed by governor; diploma and examination necessary.

23. State board. Appointed by governor; diploma and examination necessary.

24. South Dakota—No examination; must have a diploma from school requiring three years or more; diploma approved by State Board of Health.

25. Tennessee—State board; diploma sufficient; without diploma, must be examined.

26. Utah—Three State boards (regular homeopathic and eclectic). Appointed by governor; examination required; diploma not necessary.

27. Virginia—State board. Examination required; diploma not necessary.

28. Washington—State board. Appointed by governor; examination required; diploma not necessary.

29. West Virginia—State board. Appointed by governor; examination required; diploma not necessary.

30. Alabama—Examination required, regardless of diploma.